



Key Principles of High-Performing Deposit Return Systems





TOMRA
COLLECTION SOLUTIONS

THE WORLD'S MOST ADVANCED
RECYCLING SYSTEM.

4500+
employees globally



TOMRA
SORTING SOLUTIONS

~900
in America

TOMRA has four decades of experience in deposit systems

ACTIVE IN EVERY MAJOR
GLOBAL DEPOSIT MARKET



NORWAY



GERMANY



MICHIGAN



QUEBEC



NEW YORK



OREGON

+ 31 more markets

40 BILLION

cans and bottles collected annually

84,000

reverse vending machines installed globally

\$6.8 BILLION

in deposits exchanged annually

We are active in every link of the deposit value chain



REVERSE VENDING



MATERIAL RECOVERY



RVM
Technology



Service
Support



Data Admin/
Clearing



Material
Pick-Up



Material
Processing



Material
Brokerage



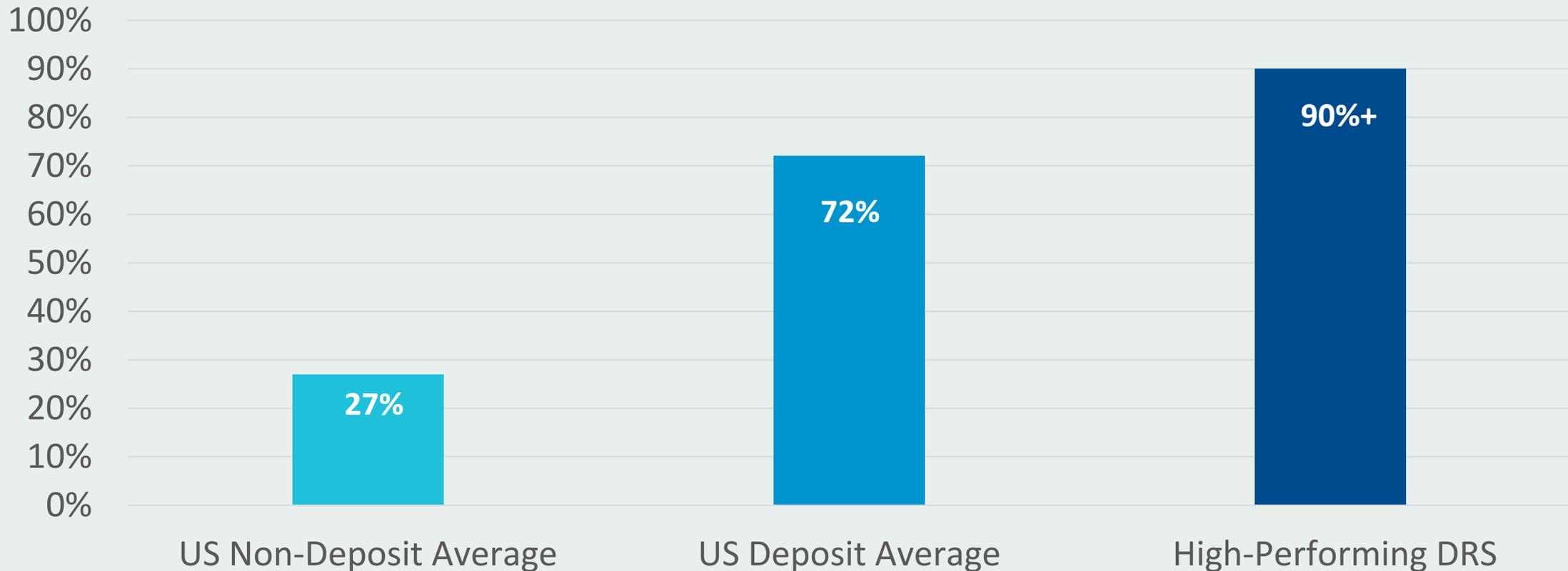
Material
Recycling

Deposit systems are known for incentivizing recycling



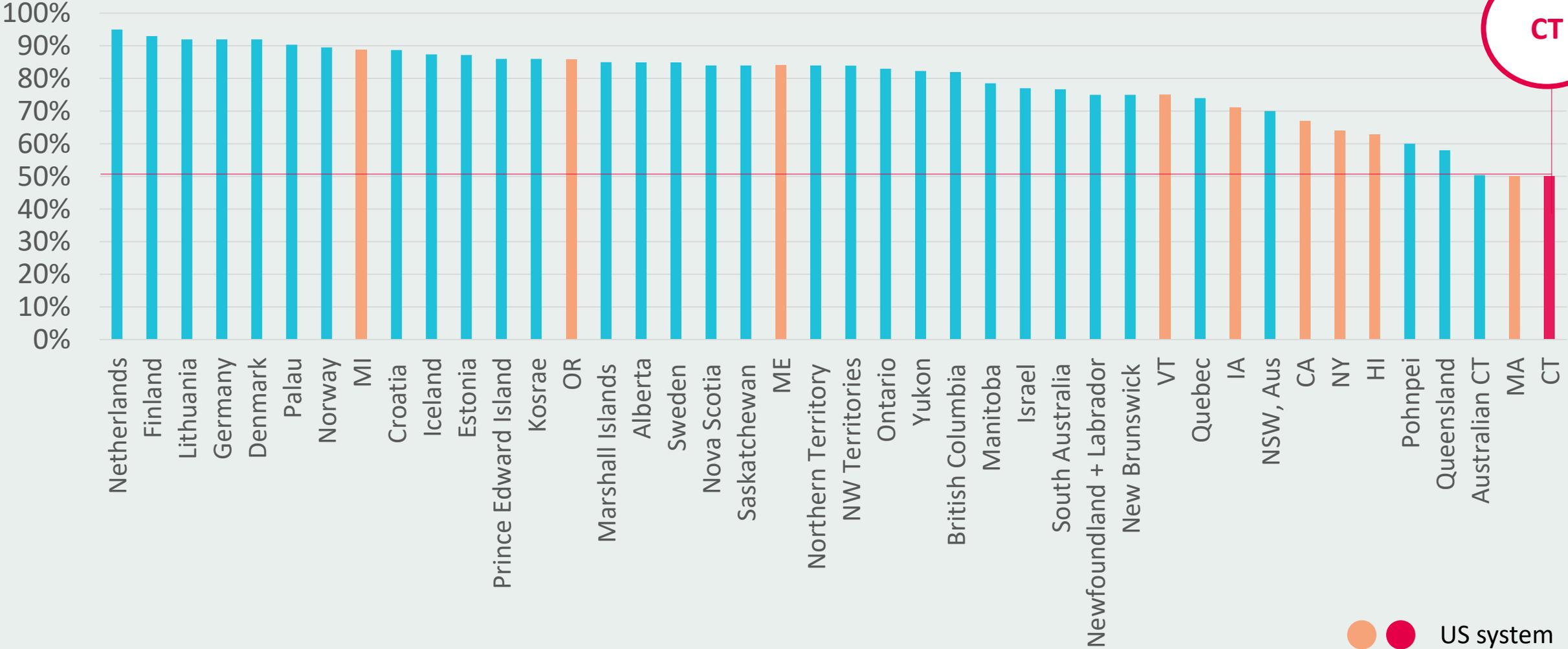
Deposit systems are extremely effective at capturing items for recycling

Beverage Container Recovery Rates for Recycling



Not all deposit systems are created equal

Return Rates of Every Deposit Return System in the World (2019)



Why are some container deposit return systems succeeding while others are failing?

What We've Learned: High-performing deposit return systems prioritize four principles

PERFORMANCE



A collection target for all beverages plus a meaningful deposit **delivers strong results.**

CONVENIENCE



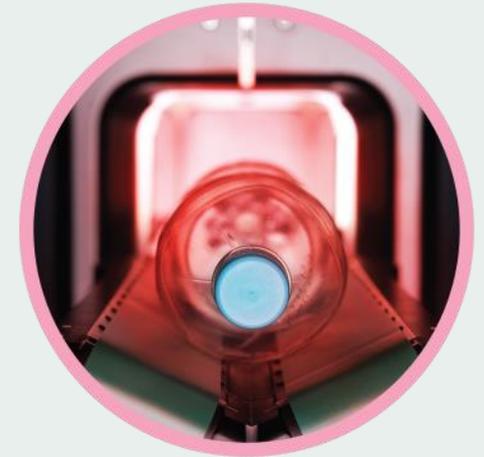
The redemption system is **easy, accessible and fair** for all users.

PRODUCER RESPONSIBILITY



Producers finance and invest in the system using the unredeemed deposits and commodity revenues.

SYSTEM INTEGRITY



Trust is built into the system through transparent management, a data-driven clearinghouse, and innovative technology.

These principles are brought to life through 12 Key Elements



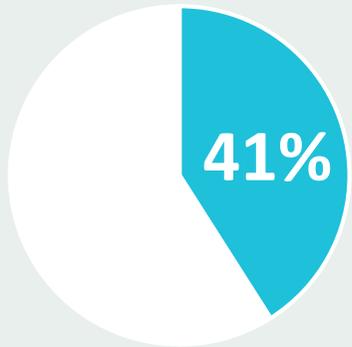


Relevant scope of beverages and containers

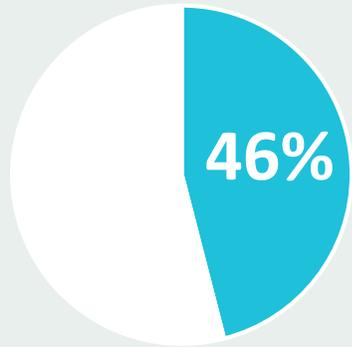
PERFORMANCE

PERCENT OF BEVERAGE UNITS COVERED BY DEPOSIT PROGRAM

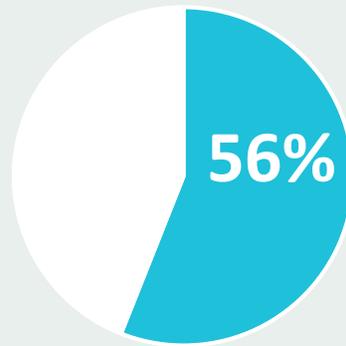
MASSACHUSETTS



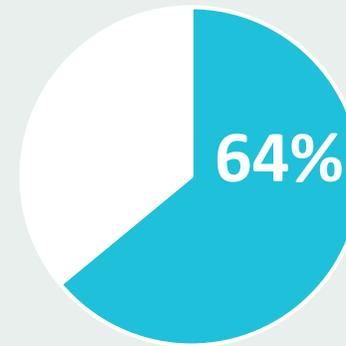
VERMONT



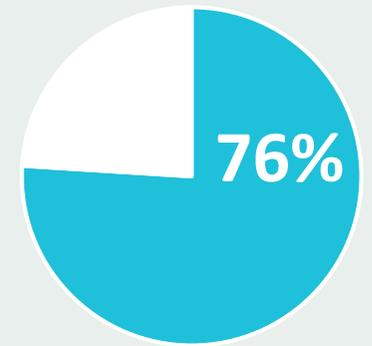
MICHIGAN



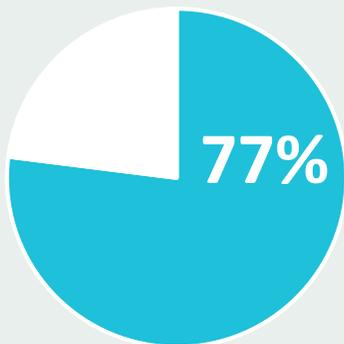
IOWA



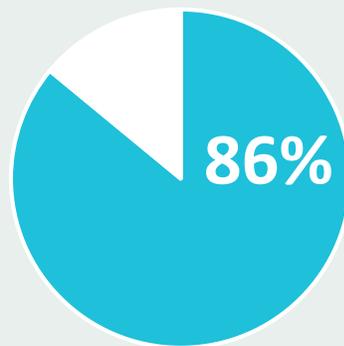
CONNECTICUT



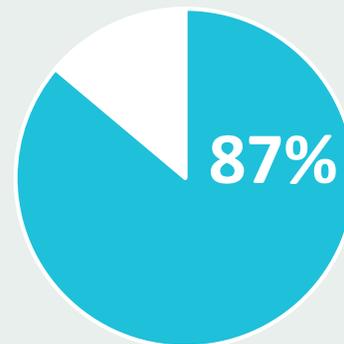
NEW YORK



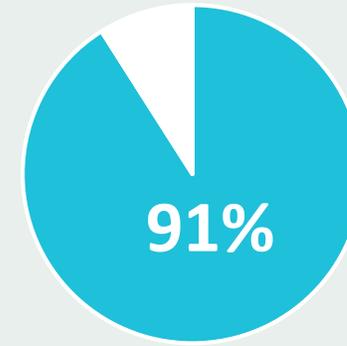
CALIFORNIA



HAWAII



MAINE



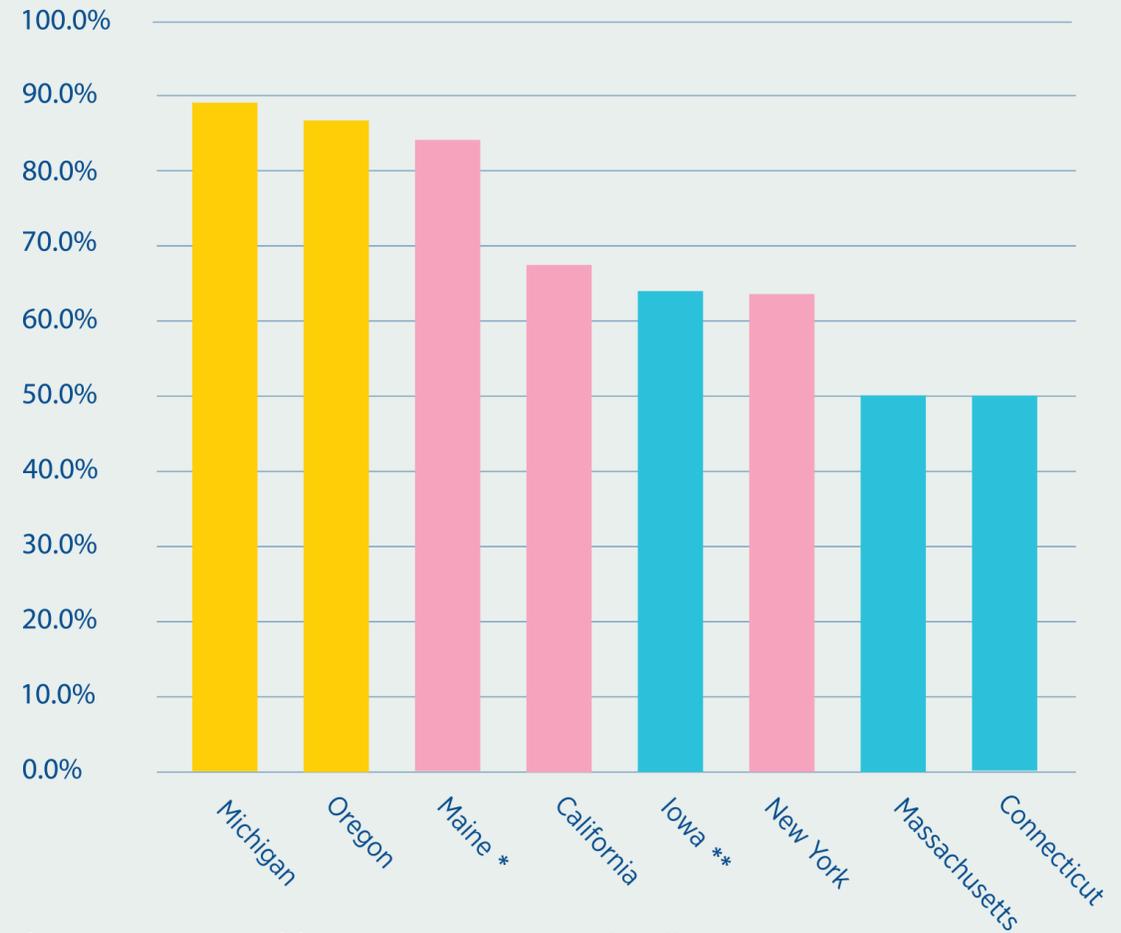


Minimum deposit value

High-performing systems establish a deposit of 10¢

- Flat 5¢ ●
- Flat 10¢ ●
- Mixed ●

U.S. Beverage Container Redemption Rates (2019)



*2017 estimate. **2016 estimate. BottleBill.org. 2019.

#4



Convenient redemption system for consumers

8 out of 10

of the highest performing deposit return systems
in the world are “return-to-retail” models

NETHERLANDS

FINLAND

DENMARK

GERMANY

LITHUANIA

NORWAY

CROATIA

MICHIGAN





Centralizing key responsibilities

The Role of a “Centralized System Manager”

Mission

- Accomplish all targets at lowest possible costs for its stakeholders

Owned and financed by

- Beverage producers and retailers

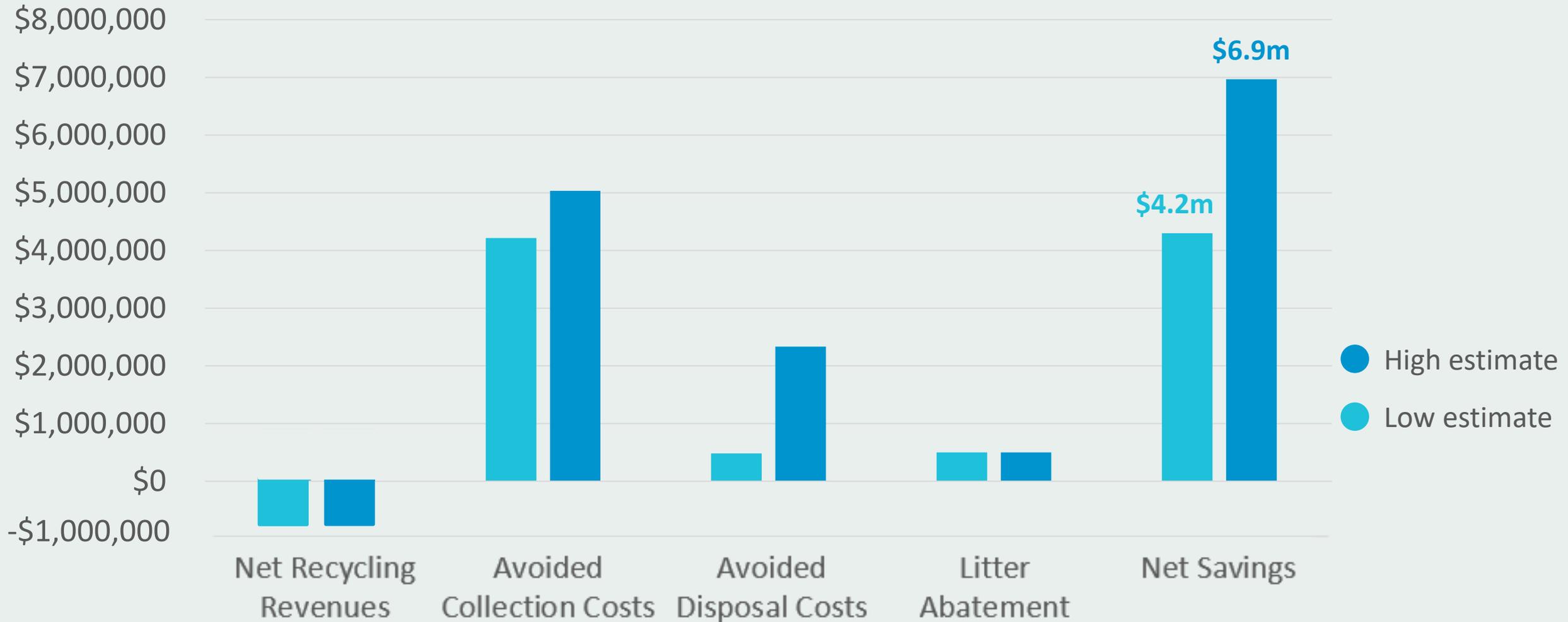
Potential Responsibilities

- Deposit clearing
- Product registration
- Fraud management
- Calculating EPR and/or handling fees
- Data management
- Commodity sales/distributions
- Material transportation
- Reporting and public education



MassDEP evaluated impacts of an expanded bottle bill

“Municipal Benefits of an Expanded Bottle Bill” (MassDEP 2009)



Further reading

Last updated: July 12, 2019



Deposit Return Systems
Factsheet: Economic Savings for Municipalities



In recent years, there has been renewed interest in deposit-return systems (DRSs) for the recovery of beverage containers. These systems place a small deposit on beverage purchases, which is refunded to the consumer when the empty container is returned for recycling.

As more countries consider DRS as a means to reduce litter and encourage recycling, many are questioning the impacts that such a system would have on municipalities, particularly those that have an existing source separation program in place. The main argument put forward by opponents is that DRSs harm municipalities by diverting recyclables with the most value from the municipal recycling stream, resulting in a reduction of the cost-effectiveness of municipal curbside programs. To support this argument, evidence is provided to show loss of material revenues as well as the industry contributions from extended producer responsibility schemes for packaging where they exist. However, one of the key elements missing in the majority of these analyses is the savings resulting from the reduced or avoided costs of collection, treatment, and disposal by the municipal waste management system.

We wanted to learn more about how municipalities are impacted by the implementation of a DRS, and so we set off on a task to compile all of the research done on the subject over the years. What we found was compelling, and sufficiently closes the case that container deposit systems are good—not bad—for municipalities. The following table presents a compilation of **32 studies** that examined the costs and benefits to municipalities of implementing (or expanding) a DRS for beverage containers. It is noteworthy that, although different in scope, location, author and year, nearly every study reported significant net

“Factsheet: Economic Savings for Municipalities”

- Compiles 30+ studies on the impact of deposit systems on municipalities
- <https://www.reloopplatform.org/resources/factsheets/>

Studies on job impacts of a modernized deposit system

Jobs Created by NY's
Current Deposit System



Total Jobs Forecasted for a *Modernized*
NY Deposit System



Thank you!

Mike Noel,
@MrMikeNoel

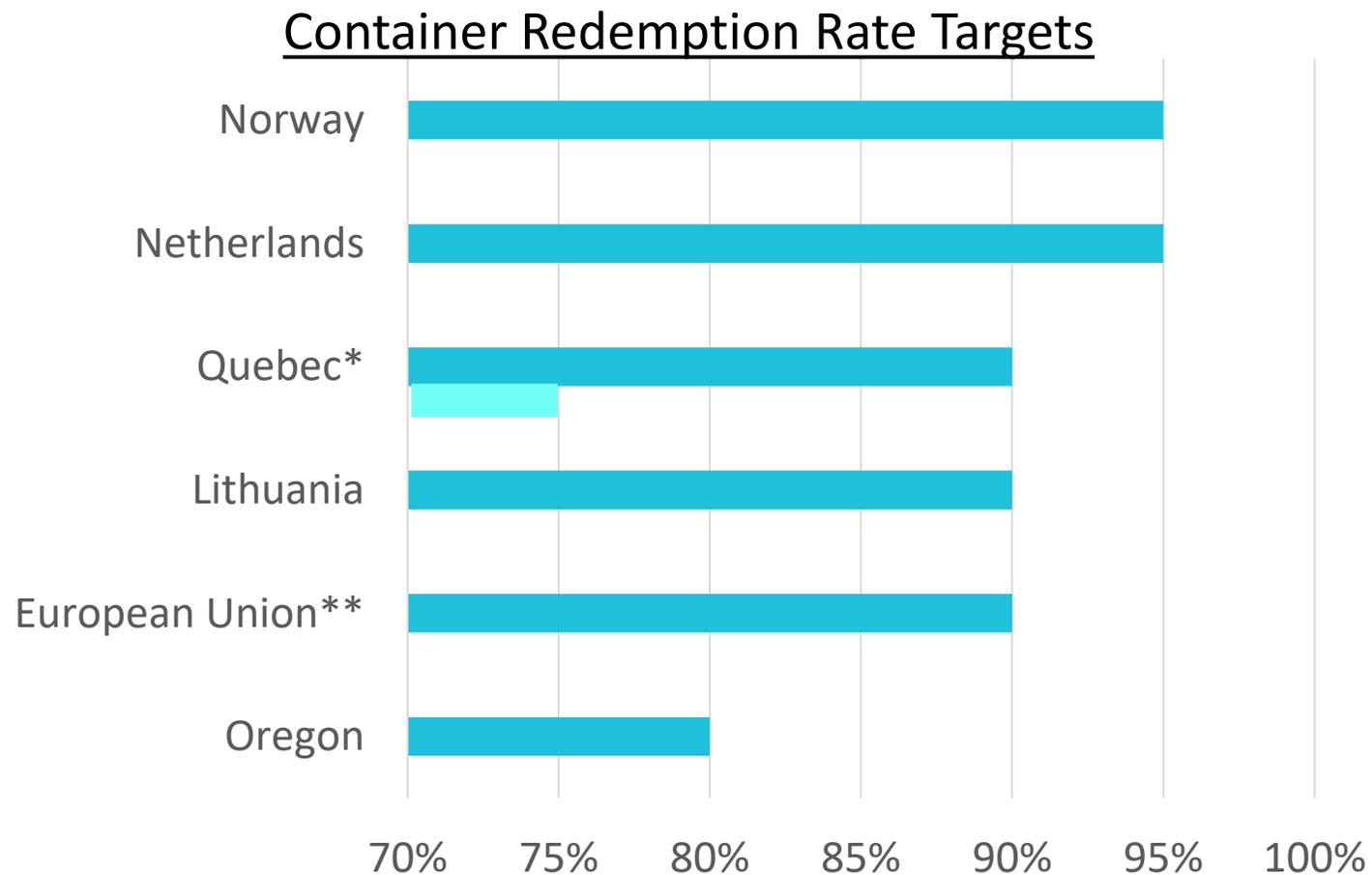


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Redemption Rate Target



When a 'redemption rate' is set in statute, stakeholders align their activities to achieve it.



*Quebec set staggered goals of 75% collection by 2025, 90% 2030. ** EU set goals of 77% collection by 2025, 90% by 2029.